



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/647,978

08/26/2003

Jason B. Chesser

42.P11893D2

2830

45209

7590

04/15/2009

INTEL/BSTZ

BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP

1279 OAKMEAD PARKWAY

SUNNYVALE, CA 94085-4040

EXAMINER

PATEL, NIHIR B

ART UNIT

PAPER NUMBER

3772

MAIL DATE

DELIVERY MODE

04/15/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/647,978	Applicant(s) CHESSER ET AL.	
	Examiner NIHIR PATEL	Art Unit 3772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31 and 33-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31 and 33-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/29/2008</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on December 29th, 2008 have been fully considered but they are not persuasive. The applicant argues that Anderson does not disclose, teach or suggest an evaporator combination including a plurality of structural elements “integrally formed in the bottom or the top cover”. The examiner disagrees with the applicant’s argument. Elements 102 and 103 are defined as the plurality of structural elements and it has been held that the term “integral” is sufficiently broad to embrace construction united by such means as fastening and welding. *In re Hotte*, 177 USPQ 326, 328 (CCPA 1973).

Response to Amendment

2. The examiner acknowledges the amendment filed on December 29th, 2008. The amendment comprises amending claims 31, 36 and 38.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims **31 and 33-38** are rejected under 35 U.S.C. 102(b) as being anticipated by Anderson et al. (US 5,761,037).

Art Unit: 3772

5. **As to claim 31**, Anderson teaches an apparatus that comprises a base configured to be thermally coupled to a semiconductor heat source, the base **105** (see **figures 1 and 2; col. 3 lines 45-60**) including a cavity **106** defined by a bottom and a peripheral portion around the perimeter of the bottom (see **figures 1 and 2**); a top cover **104** (see **figures 1 and 2; col. 3 lines 45-55**) secured to the peripheral portion of the base so as to define a sealed volume in which a working fluid is vaporized; a liquid inlet port **106** receive the working fluid in a liquid state, operatively coupled to the sealed volume (see **figure 2**); a vapor outlet **107** (see **figure 2; col. 4 lines 25-35**) port from which the working fluid exits the evaporator in a vapor state, operatively coupled to the sealed volume; a plurality of structural elements **102 and 103** (see **figures 1 and 2; col. 3 lines 55-67 and col. 4 lines 10-30**) integrally formed (see **response to arguments above**) in the bottom or the top cover, wherein the plurality of structural elements prevent the sealed volume from collapsing when the evaporator is operated such that evaporation of the working fluid occurs under sub-atmospheric conditions; and a wicking structure **101** (see **figures 1 and 2 col. 4 lines 1-10**), disposed within a portion of the cavity, having a top surface on which the working fluid is drawn through a capillary mechanism and a pressure differential between a pressure of the working fluid in the meniscus and a pressure of vaporized working fluid in the sealed volume (see **col. 4 lines 20-45**).

6. **As to claim 33**, Anderson teaches an apparatus wherein the wicking structure comprises a volume of sintered material (see **col. 4 lines 1-10**).

7. **As to claim 34**, Anderson teaches an apparatus wherein the sintered material comprises copper (see **col. 4 lines 1-10**)

Art Unit: 3772

8. **As to claim 35**, Anderson teaches an apparatus wherein each of the base and the top cover comprises stamped metal components (**see col. 3 and 4**).

9. **As to claim 36**, Anderson teaches an apparatus wherein the plurality of structural elements **102 and 103** are integrally formed (**see response to arguments above**) in the bottom they extend between the bottom and the top cover (**see figures 1 and 2; col. 3 lines 55-67 and col. 4 lines 10-30**).

10. **As to claim 37**, Anderson teaches an apparatus wherein the wicking structure includes holes therein to accommodate the plurality of structural elements extending between the bottom and the top cover (**see col. 4 lines 1-20**).

11. **As to claim 38**, Anderson teaches an apparatus wherein when the plurality of structural elements are integrally formed (**see response to arguments above**) in the top cover they extend between the top cover and the wicking structure (**see figure 2; col. 4 lines 1-20**).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 3772

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NIHIR PATEL whose telephone number is (571)272-4803. The examiner can normally be reached on 7:30 to 4:30 every other Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Bianco can be reached on (571) 272-4940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nihir Patel/
Examiner, Art Unit 3772

/Michael Brown/
Primary Examiner, Art Unit 3772